

**REMARKS**

The Applicants wish to thank the Examiner for his examination of the present application. Claims 19, 39 and 64 are cancelled, and claims 1, 9, 11, 12, 18, 25, 26, 38, 52, 53, 63, 63, 67, 68, 72 and 73 have been amended, such that claims 1, 3-6, 9, 11-18, 21, 25, 26, 29, 33, 38 41-63, 65-76 are currently pending in the application.

**35 U.S.C. §103**

Claims 1, 3-6, 9, 44 and 47 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,081,577 (Webber) in view of U.S. Patent No. 6,151,521 (Guo et al., hereinafter Guo). Amended claim 1 is directed to a method that includes obtaining a first image(s) of a body part in a first plane, wherein the first image(s) generates a first image data volume. A second image(s) of the body part is obtained in a second plane, wherein the second image(s) generates a second image data volume. Boundary image data of the body part is extracted from each of the first and second image data volumes. The extracted boundary image data is combined to form a resultant boundary data volume of the body part.

Webber discloses a image analysis method that includes obtaining a first set of images that is integrated into a first three-dimensional volume, and obtaining a second set of images that is integrated into a second three-dimensional image. A three-dimensional representation is then produced by merging the first and second three-dimensional volumes. However, nowhere does Webber disclose extracting boundary image data of a body part from each of the first and second image data volumes, as required by amended claim 1.

Nor does Webber disclose combining the extracted boundary image data to form a resultant boundary data volume of the body part.

The disclosure of Guo fails to satisfy the deficiencies of the Webber reference. Guo discloses extracting information on the boundaries of a plurality of *camera images*, but not extracting boundary image data of *a body part* from each of a first and second image data volumes, as required by amended claim 1. More particularly, Guo discloses extracting boundaries of a plurality of camera images of a patient's body taken at predetermined angles from each other (see Guo at col. 4, lines 17-41, and col. 15, lines 31 to col. 16, line 6). The images from the video cameras are spliced together based on the intersection of the extracted image boundaries to form one wide image (see Guo at col. 16, line 1). Nowhere does Guo teach or suggest extracting boundary image data of a body part from each of the first and second image data volumes, as required by amended claim 1.

Since neither Webber nor Guo teach or suggest extracting boundary image data of a body part from each of the first and second image data volumes, as required by amended claim 1, amended claim 1 is patentable over the combination of Webber and Guo. Claims 3-6, 9, 44 and 47 depend from amended claim 1, and are likewise patentable over Webber and Guo and are further allowable in view of the additional limitations set forth therein.

Claims 11-18, 21, 25, 26, 29, 33, 38, 41, 42, 45, 46, 52-58, 63, 65 and 67-76 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Webber in view of U.S. Patent No. 7,174,282 (Hollister et al., hereinafter Hollister). Amended claim 11 is directed to a method for designing a implant that includes,

in part, extracting boundary image data of the body part from each of the first and second image data volumes.

As described above, Webber fails to teach or suggest extracting boundary image data of a body part from each of the first and second image data volumes, as required by amended claim 11. Nor does Hollister teach or suggest this limitation. Since Hollister fails to teach or suggest this required limitation of amended claim 11, amended claim 11 is deemed nonobvious over Webber in view of Hollister. Claims 12-17 depend on claim 11, and are patentable over Webber and Hollister for the same reasons as claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 18 and dependent claim 21 include extracting boundary image data of the body part from each of the data volumes. Thus, amended claim 18 and claim 21 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 25 includes extracting boundary image data of the body part from each of the image data volumes. Thus, amended claim 25 is patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 26 and dependent claims 29 and 33 include extracting boundary image data of the body part from each of the data volumes. Thus, amended claim 26 and claims 29 and 33 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 38 and dependent claim 41 include extracting boundary image data of the body part from each of the data volumes. Thus, amended claim

38 and claims 41 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Claims 42, 45 and 46 depend on amended independent claim 1 and include extracting boundary image data of the body part from each of the data volumes. Thus, claims 42, 45 and 46 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 52 and dependent claims 53-58 include extracting boundary image data of the body part from each of the first and second image data volumes. Thus, claims 52-58 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 63 and dependent claim 65 include extracting boundary image data of the body part from the at least two data volumes. Thus, claims 63 and 65 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Amended claim 67 and dependent claims 68-76 include extracting boundary image data of the body part from each of the first and second image data volumes. Thus, claims 63 and 65 are patentable over Webber and Hollister for the same reasons as amended claim 11 and are further allowable in view of the additional limitations set forth therein.

Claims 19, 39 and 64 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Webber and Guo as applied to claims 1, 38 and 63, and

further in view of U.S. Patent No. 6,556,855 (Thesen et al., hereinafter Thesen). Claims 19, 39 and 64 have been cancelled. Therefore, this rejection is moot.

Claims 43 and 66 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Webber and Guo, as applied to claim 1, and further in view of U.S. Patent No. 5,759,205 (Valentine). As stated above, neither Webber nor Guo teach or suggest: extracting boundary image data of a body part from each of the first and second image data volumes, as required by claim 43 (dependent on claim 42, which in turn is dependent on amended claim 1); or extracting boundary image data of the body part from the at least two data volumes, as required by claim 66 (dependent on amended claim 63). Valentine also fails to teach or suggest such a limitation. Since none of these references teach or suggest this required limitation of claims 43 and 66, the embodiments of claims 43 and 66 are deemed nonobvious over any combination of these references.

Claims 48-51 and 59-62 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Webber and Guo, as applied to claims 11 and 52 above, and further in view of (Valentine). As stated above, neither Webber nor Guo (nor Hollister, which was applied to claims 11 and 52) teach or suggest: extracting boundary image data of the body part from each of the first and second image data volumes, as required by claims 48-51 (dependent on claim 11) and claims 59-63 (dependent on claim 52). Valentine also fails to teach or suggest such a limitation. Since none of these references teach or suggest this required limitation of claims 48-51 and 59-62, the embodiments of claims 48-51 and 59-62 are deemed nonobvious over any combination of these references.

It is submitted that all pending claims are in condition for allowance. Reconsideration of the claims and a notice of allowance are therefore requested.

It is believed that a three month extension of time is required. Applicants respectfully petition for such an extension. Authorization is hereby given to charge deposit account number 19-4972. If any additional fees are required for the timely consideration of this application, please charge deposit account number 19-4972.

Applicants request that the undersigned, Alexander J. Smolenski, Jr., be contacted if it will assist further examination of this application.

Respectfully submitted,

/Alexander J. Smolenski, Jr., #47,953/

Alexander J. Smolenski, Jr.  
Registration No. 47,953  
Attorney for Applicants

Bromberg & Sunstein LLP  
125 Summer Street  
Boston, MA 02110-1618  
(617) 443-9292

02960/00117 942689.3